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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,779	02/20/2004	Yu Gong	50277-2334	6676

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EXAMINER	
HARPER, ELIYAH STONE	

ART UNIT	PAPER NUMBER
2166	

MAIL DATE	DELIVERY MODE
03/25/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/783,779	GONG, YU	
	Examiner	Art Unit	
	ELIYAH S. HARPER	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *100-131* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *100-131* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/19/2010, 2/10/11*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed on 3/3/2011 has been entered. No claims have been added, cancelled, or amended. Accordingly, claims 100-131 are pending in this office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 100-131 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 7139779 (hereinafter Kornelsion) in view of US (20040034615 Thomson)

As for claim 100 Kornelson discloses: a source ETL application receiving, from a user, input that selects one or more database objects to be transported from a source database to a target database (See column 5 lines 45-60 and figure 3)

Wherein said source database includes source database metadata that describes a structure of database objects of said source database (See column 8 lines 20-35).

wherein said source database metadata identifies a set of tablespaces that store data for the one or more database objects to be transported, and said set of tablespaces is in a format that is understandable by the target database (See column 7 lines 5-35);

Said source ETL application cause generation of a module comprising metadata that describes a structure of said one or more database objects of said source database (See column 8 lines 25-35)

A target ETL application reading said module wherein said database includes target database metadata that describes a structure of database objects of said target database (See column lines 53-61)

Wherein said target ETL application includes target ETL metadata, separate from said target database metadata, that describes a structure of said database objects of said target database (See column 7 lines 1-20).

Wherein reading said module causes said target ETL application to perform

Modifying said target ETL metadata based on said source ETL metadata read from said module to describe a structure of said one or more database objects of said target database (See column 7 lines 35-55); and

Modifying said target database metadata based on said metadata read from said module to describe the structure of said one or more database objects of said one or more database objects of said source database (See column 8 lines 20-35) ;

A target database system incorporating a copy of said set of tablespaces that store said data for at least one of said one or more database objects wherein incorporating said copy of said set of tablespaces includes modifying the target database metadata to define said copy of said set of tablespaces as a set of tablespaces that are used to store said data for at least one of said one or more database objects. (See column 12 lines 1-15).

Kornelson however does not explicitly disclose: wherein said source ETL application includes source ETL metadata, separate from said source database metadata. Thomson however does disclose: wherein said source ETL application includes source ETL metadata, separate from said source database metadata (See paragraph 0063); It would have been obvious to an artisan of ordinary skill in the pertinent at the time the invention was made to have incorporated the teaching of Thomson into the system of Kornelson. The modification would have been obvious because the two references are concerned with the solution to problem of data processing, therefore there is an implicit motivation to combine these references. In other words, the ordinary skilled artisan, during his/her quest for a solution to the cited

problem, would look to the cited references at the time the invention was made. Consequently, the ordinary skilled artisan would have been motivated to combine the cited references since Thomson's teaching would enable user's of the Kornelson system to have more flexibility and efficiency transforming data into different formats for storage and retrieval purposes (See Thomson paragraphs 0011-0012).

As for claim 101 the rejection of claim 100 is incorporated and further Thomson discloses: in response to a failure occurring during the loading of said database objects within said target database, rolling back all changes made during the loading of the database objects to the target database (See paragraph 0066).

As for claim 102 the rejection of claim 100 is incorporated and further Thomson discloses: wherein the selected one or more database objects to be transported from a source database to a target database includes a database object that has metadata stored outside of the source database (See paragraphs 0151-0153).

As for claim 103 the rejection of claim 100 is incorporated and further Thomson discloses: wherein generation of a module includes analyzing the source database metadata for dependencies (See paragraph 0009).

As for claim 104 the rejection of claim 100 is incorporated and further Thomson discloses: wherein analyzing the source database metadata for dependencies includes

ensuring proper order of loading of the source database metadata into the target database (See paragraph 0046, 0107).

As for claim 105 the rejection of claim 100 is incorporated and further Thomson discloses: storing said module in one or more files in a source file system (See paragraph 0046).

As for claim 106 the rejection of claim 105 is incorporated and further Kornelson discloses: said target ETL application performing the steps of: reading a specification containing information for how to move modules from said source file system to a target file system; and wherein said information comprises a network protocol and the location in the source file system of said one or more files; and accessing said one or more files in a source file system based on said information (See column 7 lines 55-68).

As for claim 107 the rejection of claim 106 is incorporated and further Thomson discloses: wherein the network protocol is one of FTP, HTTP, HTTPS, or rsync (See paragraphs 0006, 0037, figure 2).

Claims 108-115 are method claims corresponding to the method of claims 100-115 and are thus rejected for the same reasons as set forth in the rejection of claims 100-115.

Claims 116-131 are computer-readable volatile or non-volatile storage device claims corresponding to claims 100-115 and are thus rejected for the same reasons as set forth in the rejection of claims 101-115.

Response to Arguments

Applicant's arguments filed 3/3/2011 have been fully considered but they are not persuasive.

Applicant argues:

Claims 100 and 116 each recites in part: "a source ETL application receiving, from a user, input that selects one or more database objects to be transported from a source database to a target database" No combination of Kornelson and Thomson teaches or suggests the quoted feature. The Office Action relies on Kornelson at col. 5, lines 45-60 and figure 3 to allegedly teach the quoted feature. The cited passage describes extracting information from server log files, transforming the information, and storing the information in a data warehouse. It appears that the Office Action broadly interprets a database so that a log file is considered to be equivalent to the claimed source database. However, such an interpretation is unreasonably broad in light of Applicant's specification. Applicant's disclosure relates to database systems. There are many words in the specification that pertain to a database management system and not to a log file. For example, the definitions section on page 8 includes definitions for database terminology that is not relevant to a log file such as: view, tablespace, and stored procedures. A person of ordinary skill in the art would not have interpreted a log file as a database system as described in Applicant' s specification. Thus, Examiner' s interpretation of database is unreasonably broad. Using a proper interpretation of "database", Kornelson does not disclose a source database. Furthermore, database

objects are not extracted from Kornelson's log files because a log file contains log entries; a log file does not contain database objects. In addition, the cited passage does not describe receiving input from a user that selects one or more log entries (or any other subset of a log file) to be transported to a data warehouse. Kornelson describes potentially 500 servers providing data to be stored in the data warehouse. In such an environment, it would not be practical to rely on user input to select database objects to transport. Thus, Kornelson does not provide the quoted feature, and Thomson is not alleged to provide the quoted feature.

Examiner responds:

Examiner is not persuaded. Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. Interpretation of Claims-Broadest Reasonable Interpretation: During patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969). In this case the log files are records comprised of data (See column 6 lines 55-65). The transformation process is to transform the information from several servers into a common format that can be stored in a relational database thus there are many source databases (however each one is processed individually) and one target.

Applicant argues:

Claims 100 and 116 each recites in part: "wherein said source database metadata identifies a set of tablespaces that store data for the one or more database objects to be transported, and said set of tablespaces is in a format that is understandable by the target database;" Neither Kornelson nor Thomson teaches or suggests the quoted feature.

The Office Action relies on the passage at paragraph Column 7, lines 5-35 of Kornelsen to allegedly teach the entire quoted feature. The cited passage describes the creation of fact files and dimension files that are constructed from data extracted from the log files. However, as explained above, Kornelson does not disclose a source database, and thus, could not disclose source database metadata. Even if it were reasonable to consider a log file equivalent to a source database and a dimension file as equivalent to source database metadata, Kornelson's dimension file does not identify a set of tablespaces that store data for the one or more database objects to be transported. The cited passage also describes the construction of fact tables and dimension tables in the target data warehouse database, but the fact tables and dimension tables do not identify a set of tablespaces. In fact, in general, a database table is not, and does not, identify a tablespace. The figure below is taken from a document on Oracle's web site:

The figure depicts the relationship between tablespaces and tables. A table is a database object, whereas a tablespace is comprised of one or more physical data files in the file system for storing database objects. Each database object is contained within

a tablespace, but may span more than one data file. Also, a table does not identify the tablespace in which the table is stored, or any other tablespace. Thus, a table does not identify a tablespace.

Kornelson's dimension tables and fact tables only come into existence when the dimension tables and fact tables are created in the target database. Once they exist in the target database, they are merged with the pre-existing, corresponding data warehouse tables. The dimension tables and fact tables are not "to be transported." Thomson does not, nor is it alleged to, teach the quoted feature. There is no mention of tablespaces in Thomson, nor is there any other equivalent structure in Thomson that teaches or suggests the quoted feature.

Examiner responds:

Examiner is not persuaded. Initially examiner notes that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091,231 USPQ 375 (Fed. Cir. 1986). Moreover the "Test of obviousness is not whether features of secondary reference may be bodily incorporated into primary reference's structure, nor whether claimed invention is expressly suggested in any one or all of references; rather, test is what combined teachings of references would have suggested to those of ordinary skill in art." In re Keller, Terry, and Davies, 208 USPQ 871 (CCPA 1981).

Applicant argues:

Also, Claims 100 and 116 each recites in part: "a target database system incorporating a copy of said set of tablespaces that store said data for at least one of said one or more database objects, wherein incorporating said copy of said set of tablespaces includes modifying the target database metadata to define said copy of said set of tablespaces as a set of tablespaces that are used to store said data for at least one of said one or more database objects." No combination of Komelson and Thomson teaches or suggests the quoted feature.

The Office Action relies on column 12, lines 1-15 to allegedly teach the quoted feature. However, the cited passage is part of a general description of a computing environment in which Kornelson's approach may be used. There is no mention in the cited passage of target databases, tablespaces, target database metadata or any equivalent element thereof. The claimed one or more database objects are the objects transported from the source database, and the data for the one or more objects are stored in a set of tablespaces. There is no disclosure anywhere in Kornelson of incorporating into the target database tablespaces that store data for the claimed one or more database objects, nor is there any disclosure of modifying target database metadata to define the copy of the set of tablespaces to be used to store data for at least one of the claimed one or more database objects. Thomson does not, nor is it alleged to teach the quoted feature.

Examiner responds:

Examiner is not persuaded. Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. Interpretation of Claims-Broadest Reasonable Interpretation: During patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969). In this case metadata is simply data about data and almost all of the data used in either reference would classify as metadata. Moreover the disclosure of Kornelson column 12 lines 1-15 clearly indicate incorporating and storing multiple copies and the "Test of obviousness is not whether features of secondary reference may be bodily incorporated into primary reference's structure, nor whether claimed invention is expressly suggested in any one or all of references; rather, test is what combined teachings of references would have suggested to those of ordinary skill in art." In re Keller, Terry, and Davies, 208 USPQ 871 (CCPA 1981).

Applicant argues:

Claims 108 and 124 recite features that are very similar to the quoted features of Claims 100 and 116: "wherein said source database metadata identifies a set of tablespaces that store data for the one or more database objects to be transported, and said set of tablespaces is in a format that is understandable by the target database;"

This claim feature is identical to a claim feature in Claims 100 and 116 that was shown above to be patentable over Kornelson and Thomson. "modifying said target database metadata to define a copy of said set of tablespaces as a set of tablespaces that are used to store said data for at least one of said one or more database objects." This claim feature is very similar to the claim feature recited in Claims 100 and 116. Neither Kornelson nor Thomson, and thus, no combination thereof, describes modifying target database metadata to define a copy of tablespaces to be the set of tablespaces that are used to store data for one or more database objects. The Office Action states that Claims 108 and 124 are rejected for the same reasons as for Claims 100 and 116. Thus, the arguments given above that traverse the rejection of Claims 100 and 116 also traverse the rejection of Claims 108 and 124. Therefore, Claims 108 and 124 are each patentable under 35 U.S.C. § 103(a) over the combination of Kornelson and Thomson.

Examiner responds:

Examiner is not persuaded. Examiner is not persuaded. Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. Interpretation of Claims-Broadest Reasonable Interpretation: During patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969). In this case the log files are records comprised of data

(See column 6 lines 55-65). The transformation process is to transform the information from several servers into a common format that can be stored in a relational database thus there are many source databases (however each one is processed individually) and one target.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIYAH S. HARPER whose telephone number is (571)272-0759. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ESH
Eliyah S. Harper
March 23, 2011

/Hosain T Alam/
Supervisory Patent Examiner, Art Unit 2166